

What is claimed is:

1. An exhaust emission purifying apparatus that performs the purification process of exhaust gas emitted from an engine for an industrial vehicle comprising:

a collection section that collects particulates contained in the exhaust gas emitted from the engine;

a detection section that detects information on the amount of the particulates collected at the collection section;

a temperature adjustment mechanism that adjusts the temperature of the exhaust gas, which effects the collection section, to a predetermined temperature corresponding to the combustion temperature of the particulates; and

a control section that controls the temperature adjustment mechanism on the basis of the information detected at the detection section,

wherein the temperature adjustment mechanism is constructed with at least an injection amount adjustment section that adjusts the amount of the fuel injected to the engine, an engine load adjustment section that adjusts the load on the engine, and an air intake restriction adjustment section that performs restriction adjustment of the amount of air intake to the engine.

2. The exhaust emission purifying apparatus according to claim 1, wherein in the case where the amount of the collected particulates is equal to or more than a predetermined threshold value, the control section controls the injection amount adjustment section such that the value of the engine speed becomes equal to or greater than a predetermined first reference value and also controls the engine load adjustment section such that the value of the throttle opening degree becomes equal to or greater than a predetermined second reference value, and further control

section controls the air intake restriction adjustment section to restrict the amount of air intake of the engine.

3. The exhaust emission purifying apparatus according to claim 1 or 2, wherein the temperature adjustment mechanism further includes a fuel injection timing adjustment section that adjusts the timing of fuel injection for the engine.

4. The exhaust emission purifying apparatus according to claim 3, wherein in the case where the temperature of the exhaust gas at the outlet of the collection section is even higher than a determination temperature that is higher than the target temperature, the fuel injection timing adjustment mechanism advances the timing of fuel injection.

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5. The exhaust emission purifying apparatus according to claim 3, wherein in the case where the temperature of the exhaust gas at the outlet of the collection section is even lower than a determination temperature that is higher than the target temperature, the fuel injection timing adjustment mechanism delays the timing of fuel injection.

6. The exhaust emission purifying apparatus according to any one of claims 1 to 5, wherein the engine load adjustment section includes a hydraulic pump driven by the engine and a hydraulic pressure adjustment mechanism that is connected to the hydraulic pump and adjusts the hydraulic pressure.

7. A method for performing purification process of exhaust gas emitted from an engine for an industrial vehicle, wherein the method comprising:

a step of collecting particulates in the exhaust gas emitted from the engine,

a step of detecting information on the amount of the

collected particulates, and

a step of controlling the amount fuel injected to the engine, an engine load, and the amount of air intake to the engine based on the detected information, thereby setting the temperature of the exhaust gas, which affects the collected particulates, to a predetermined target temperature corresponding to the combustion temperature of the same particulates.

8. The method according to claim 7, wherein the step of setting the temperature of the exhaust gas to a predetermined target temperature corresponding to the combustion temperature of the particulates includes:

a step of controlling the engine speed and the amount of fuel injection to values equal to or greater than predetermined values set as the minimum;

a step of raising the temperature of the exhaust gas by controlling the air intake restriction of the engine; and

a step of controlling the engine load and the amount of fuel injection such that the temperature of the exhaust gas becomes equal to or higher than the target temperature.

9. The method according to claim 7, wherein the step of setting the temperature of the exhaust gas to a predetermined target temperature corresponding to the combustion temperature of the particulates includes:

a step of controlling the engine speed and the amount of fuel injection to values equal to or greater than predetermined value set as the minimum;

a step of raising the temperature of the exhaust gas by controlling the air intake restriction of the engine and the timing of fuel injection; and

a step of controlling the engine load and the amount of fuel injection such that the temperature of the exhaust gas becomes equal to or higher than the target temperature.

10. The method according to claim 9, wherein the fuel injection timing is advanced in the case where the temperature of the exhaust gas at the outlet of the collection section is higher than a determination temperature that is higher than the target temperature.

11. The method according to claim 9, wherein the fuel injection timing is delayed in the case where the temperature of the exhaust gas at the outlet of the collection section is lower than a determination temperature that is higher than the predetermined temperature.